Expand the Green Building Ordinance Energy Code

1-L1

Supports CA2020 Goal 1: **Increase Building Energy Efficiency**

GHG Reductions by 2020: ***80 $MTCO_2e$ per year***

Require new development to exceed CALGreen Title 24 standards through Tier 1 voluntary standards (15% reduction from 2010 Title 24 standards) or Tier 2 (30% reduction from 2010 Title 24 standards), or another percentage beyond Title 24. Extend this requirement to apply to future updates to the Title 24 code until zero net energy is achieved through state building standards. Incorporate green building principles and practices into the planning, design, construction, management, renovation, operations, and demolition of all new buildings.

Community Co-Benefits

Implementation:

Each jurisdiction would be responsible for developing and implementing a new Green Building Ordinance (GBO) consistent with the goals chosen as part of this measure.

Measure Commitments:

Each jurisdiction will adopt a percentage beyond Title 24 as part of an updated GBO.

Key Progress Indicators:

1. Energy consumption
2. Energy savings
3. The number of new homes and businesses compliant with new GBOs

Outdoor Lighting

1-L2

Supports CA2020 Goal 1: **Increase Building Energy Efficiency**

GHG Reductions by 2020: ***1,554 $MTCO_2e$ per year***

Adopt outdoor lighting standards to reduce electricity consumption above and beyond the requirements of AB 1109. Replace a certain percentage of incandescent outdoor lighting with light-emitting diode (LED) bulbs by 2020.

Community Co-Benefits

Implementation:

Implementation mechanisms will be chosen by each jurisdiction and may include developing a new ordinance requiring LED outdoor lighting for new development and/or providing incentives for bulb replacement in existing fixtures.

Measure Commitments:

Each jurisdiction will adopt a goal for the percent of outdoor lighting to be replaced with high efficiency LEDs, between 20% and 80%.

Key Progress Indicators:

1. Energy consumption
2. Energy savings
3. The number of LED outdoor lights installed/sold

Shade-Tree Planting

1-L3

Supports CA2020 Goal: 1 **Increase Building Energy Efficiency**

GHG Reductions by 2020: ***45 $MTCO_2e$ per year***

Expand on current urban tree planting policies and programs to establish a shade tree planting goal for each jurisdiction to help reduce building energy use. The communities already have different tree planting programs that vary by location.

Community Co-Benefits

Implementation:

Implementation mechanisms may include:

- Establishing goals and funding sources for new trees planted on city/County property
- Implementing a requirement to account for trees removed and planted as part of new construction
- Requiring new development to plant shade trees (e.g., a certain number of new trees per dwelling unit, new resident, square footage of building, or size of lot)
- Providing rebates for the purchase of new trees and education about the benefits of shade trees and tree care for residents.

Measure Commitments:

Each jurisdiction will adopt a goal for the number of new trees planted by 2020, between 50 and 1,000.

Key Progress Indicators:

1. Energy consumption
2. Energy savings
3. The number of trees planted

Co-Generation Facilities

1-L4

Supports CA2020 Goal 1: **Increase Building Energy Efficiency**

GHG Reductions by 2020: ***3 $MTCO_2e$ per year***

Optimize the use of locally generated energy by encouraging, where feasible, co-generation facilities in new commercial and industrial facilities greater than 100,000 square feet. The jurisdictions will encourage co-generation facilities through a number of actions, such as amending ordinances, removing regulatory barriers, providing financial incentives, and providing outreach.

Community Co-Benefits

Implementation:

Implementation mechanisms in each jurisdiction could include developing new ordinances or offering incentives for co-generation facilities. For example, a GBO may include LEED certification credits (or other GBO compliance mechanisms) for the use of co-generation. The jurisdictions could offer financial incentives for combined heat and power system development by securing funding available through partnerships with utilities, state and federal government programs (e.g., tax credits, rebates, grants, low-interest loans), energy performance contracts, and non-profit organizations. The communities can also encourage cogeneration by removing any unintended regulatory barriers, such as standard interconnection requirements, net metering, and output-based regulations (U.S. Environmental Protection Agency 2014b). The communities would need to identify land uses that would be appropriate for this measure, and then conduct outreach efforts that explain new ordinances or incentives that are being offered.

Measure Commitments:

Each jurisdiction will adopt a goal for installation of new combined heat and power capacity.

Key Progress Indicators:

1. The number of co-generation projects
2. The capacity (kilowatt) and generation (kilowatt-hours) for each new combined heat and power system facility

Solar in New Residential Development

2-L1

Supports CA2020 Goal 2: **Increase Renewable Energy Use**

GHG Reductions by 2020: ***246 $MTCO_2e$ per year***

Implement a requirement to install solar energy systems on new residential buildings to increase local renewable energy generation. Under this measure, the jurisdictions will also encourage or require solar installations on as many new multi-family developments as feasible.

Community Co-Benefits

Implementation:

This could be implemented through discretionary approvals and permitting for new projects. This program may also include streamlined permitting, providing information to homeowners for low-interest financing, assisting homeowners in purchasing solar photovoltaics through low-interest loans or property tax assessments, requiring that new development provide for solar access and build solar-ready features into buildings, and establishing guidelines for solar development. Funds may be provided through the Solar Sonoma County/Solar Action Alliance, and other sources. The jurisdictions may encourage solar installation by forming partnerships with Sonoma Clean Power, Pacific Gas & Electric Company (PG&E) and other private sector funding sources, or other solar lease or power purchase agreement (PPA) companies. The communities would be responsible for implementing this measure through coordination with relevant entities, such as PG&E, PPA companies, and solar financing organizations. The actual market penetration rates that each jurisdiction will achieve will likely be influenced by how the community implements this measure. For example, adopting an ordinance to require solar in all new housing would result in a 100% participation rate. Alternatively, a jurisdiction may rely on voluntary solar installation using the funding sources and financing options discussed above. In this approach, participation rates would increase to the extent that funding is available, most likely resulting in less than a 100% participation rate.

Measure Commitments:

Each jurisdiction will adopt a goal for the percentage of new homes installing solar by 2020, between 8% and 100%.

Key Progress Indicators:

1. The number of residential photovoltaic (PV) installations
2. PV electric generation capacity
3. Actual PV electric generation

Solar in Existing Residential Development

2-L2

Supports CA2020 Goal: 2 **Increase Renewable Energy Use**

GHG Reductions by 2020: ***9,942 $MTCO_2e$ per year***

Incentivize solar energy installation on existing residential buildings to increase renewable energy generation.

Community Co-Benefits

Implementation:

This could be implemented through the permitting process for major remodels and through incentives for existing homes. The jurisdictions could require solar installation on all existing homes that undergo major remodels. This program may also include streamlined permitting, providing information to homeowners for low-interest financing, assisting homeowners in purchasing solar photovoltaics through low-interest loans or property tax assessments, and establishing guidelines for solar development. Funds may be provided through the Solar Sonoma County/Solar Action Alliance and Property Assessed Clean Energy (PACE) financing options available through the County of Sonoma Energy and Sustainability Division (ESD). The jurisdictions may encourage solar installation by forming partnerships with PG&E and other private sector funding sources including SunRun, SolarCity, or other solar lease or PPA companies. The jurisdictions would be responsible for implementing this measure through coordination with relevant entities, such as PG&E, PPA companies, and solar financing organizations.

Measure Commitments:

Each jurisdiction will adopt a goal for the percentage of existing homes installing solar by 2020, between 2% and 15%.

Key Progress Indicators:

1. The number of PV installations on existing homes
2. PV electric generation capacity
3. Actual PV electric generation

Solar in New Nonresidential Developments

2-L3

Supports CA2020 Goal: **Increase Renewable Energy Use**

GHG Reductions by 2020: ***528 $MTCO_2e$ per year***

Implement a requirement to install solar energy systems on new nonresidential development to increase local renewable energy generation. Under this measure, the jurisdictions will encourage or require solar installations on as many new nonresidential developments as feasible.

Community Co-Benefits

Implementation:

This could be implemented through discretionary approvals and permitting for new projects. This program may also include streamlined permitting, providing information to developers for low-interest financing, assisting developers in purchasing solar photovoltaics through low-interest loans or property tax assessments, requiring that new development provide for solar access and build solar-ready features into buildings, and establishing guidelines for solar development. Funds may be provided through the Solar Sonoma County/Solar Action Alliance and other sources. The jurisdictions may encourage solar installation by forming partnerships with Sonoma Clean Power, PG&E and other private sector funding sources, or other solar lease or PPA companies. The communities would be responsible for implementing this measure through coordination with relevant entities, such as PG&E, PPA companies, and solar financing organizations. The actual market penetration rates that each community will achieve will likely be influenced by how the jurisdiction implements this measure. For example, adopting an ordinance to require solar in all new nonresidential development would result in a 100% participation rate. Alternatively, an ordinance with building-size thresholds, such as an ordinance that requires solar only for buildings greater than a certain square footage, would result in a lower participation rate.

Measure Commitments:

Each community will adopt a goal for the percentage of new nonresidential projects installing solar by 2020, between 2% and 75%.

Key Progress Indicators:

1. The number of nonresidential PV installations
2. PV electric generation capacity
3. Actual PV electric generation

Solar in Existing Nonresidential Buildings

2-L4

Supports CA2020 Goal 2: **Increase Renewable Energy Use**

GHG Reductions by 2020: ***25,573 $MTCO_2e$ per year***

Incentivize solar energy installation for existing nonresidential buildings to increase renewable energy generation.

Community Co-Benefits

Implementation:

This measure could be implemented through discretionary approvals and permitting for existing projects as well as incentives for nonresidential buildings outside the permitting process. The jurisdictions can require all existing buildings that undergo major remodels or renovations to install solar. This program may also include streamlined permitting, providing information to developers for low-interest financing, assisting developers in purchasing solar photovoltaics through low-interest loans or property tax assessments, and establishing guidelines for solar development. Funds may be provided through the Solar Sonoma County/Solar Action Alliance and PACE financing options available through ESD. The jurisdictions may encourage solar installation by forming partnerships with PG&E and other private sector funding sources including SunRun, SolarCity, or other solar lease or PPA companies. The communities would be responsible for implementing this measure through coordination with relevant entities, such as PG&E, PPA companies, and solar financing organizations.

Measure Commitments:

Each jurisdiction will adopt a goal for the percentage of existing nonresidential buildings installing solar by 2020, between 2% and 25%.

Key Progress Indicators:

1. The number of nonresidential PV installations
2. PV electric generation capacity
3. Actual PV electric generation

Convert to Electric Water Heating

3-L1

Supports CA2020 Goal 3: **Switch Equipment from Fossil Fuel to Electricity**

GHG Reductions by 2020: ***2,215 $MTCO_2e$ per year***

Replace residential natural gas water heating equipment with electric water heating. This measure shifts the energy source from a relatively high GHG-intensive source (natural gas) to a lower GHG-intensive source—clean electricity.

Community Co-Benefits

Implementation:

Implementation mechanisms in each jurisdiction could include developing ordinances to require electric water heating for new development or implementing incentives for installing electric water heaters in existing buildings. The communities would need to develop outreach efforts to increase awareness among community members.

Measure Commitments:

Each jurisdiction will adopt a goal for the percentage of homes replacing natural gas heaters with electric water heaters, between 1% and 10%.

Key Progress Indicators:

1. Energy consumption
2. Energy savings
3. The number of electric water heaters installed

Mixed-Use Development in City Centers and along Transit Corridors 4-L1

Supports CA2020 Goal: **Reduce Travel Demand through Focused Growth**

GHG Reductions by 2020:

The jurisdictions would focus new residential and commercial development in their city centers and along existing and planned transit corridors. Mixed-use development (such as residential use above commercial uses) in such locations would improve the diversity of nearby land uses and facilitate easier access to retail and commercial destinations. Improving the jobs/housing balance would also facilitate access to work destinations. Development adjacent to transit centers and along active transit corridors (commonly called *transit-oriented development* or TOD) would increase the amount of trips that can be completed via transit instead of personal vehicles.

Community Co-Benefits

Implementation:

The jurisdictions will develop appropriate tools to encourage mixed-use, infill, and TOD for cities and urbanized unincorporated areas. The primary method will be through updated General Plans and Specific Plans and associated land use designations and site zoning. Policies could include updating zoning codes and improving transit and shuttle service in areas targeted for mixed-use development. The communities would promote and apply existing policies and incentives to further encourage mixed-use, infill, and TOD. Potential incentives could include reduced parking requirements, reductions in building and permit fees, density increases, and other related items.

Measure Commitments:

Each community will set a goal for percentage of new development that results in mixed use, between 15% and 70%; reduces VMT by 4% to 19%.

Key Progress Indicators:

1. The percentage of growth resulting in mixed-use development
2. VMT by transportation mode
3. Transportation mode share percentages
4. Gasoline/diesel fuel usage/sales

Increase Transit Accessibility

4-L2

Supports CA2020 Goal 4: **Reduce Travel Demand through Focused Growth**

GHG Reductions by 2020: ***1,057 MTCO2e per year***

Encourage all new residential projects consisting of 25 units or more to be located within 0.5 mile of a transit node, shuttle service, or bus route with regularly scheduled, daily service. Consider requirements such as reduced parking, unbundled parking, subsidized public transportation passes, or ride-matching programs, based on site-specific review.

Community Co-Benefits

Implementation:

Each jurisdiction will identify potential areas for TOD and prepare policies and incentives to encourage development near high-quality transit service. Strategies include encouraging TOD in updated General Plans, Specific Plans, and zoning codes, and developing new ordinances requiring transit accessibility. Potential incentives could also include reduced parking requirements, reductions in building and permit fees, density increases, and other related items. The communities may also work with the RCPA/Sonoma County Transportation Authority (SCTA) and transit agencies on this measure.

Measure Commitments:

Reduce communitywide VMT by 0.4% to 5% by encouraging residential development near transit.

Key Progress Indicators:

1. The percentage of growth resulting in 25+ unit residential development located 0.5 mile from a transit station
2. VMT by transportation mode
3. Transportation mode share percentages
4. Gasoline/diesel fuel usage/sales

Supporting Land Use Measures

4-L3

Supports CA2020 Goal 4: **Reduce Travel Demand through Focused Growth**

GHG Reductions by 2020: ***Not Quantified***

Encourage new development to provide amenities to support transit and other modes of transportation, including transit stops, bicycle facilities, good pedestrian networks, car-sharing locations, and EV charging stations.

Community Co-Benefits

Implementation:

Each jurisdiction will identify potential areas for TOD and develop policies and incentives to encourage development near high-quality transit service. Strategies include encouraging TOD in updated General Plans, Specific Plans, and zoning codes, and developing new ordinances requiring transit accessibility. Potential incentives could also include reduced parking requirements, reductions in building and permit fees, density increases, and other related items. The communities may also work with the RCPA/SCTA and transit agencies on this measure.

Measure Commitments:

Encourage new development to provide amenities to support transit and other modes, including transit stops, bicycle facilities, pedestrian networks, car-sharing, and EV charging

Key Progress Indicators:

1. VMT by transportation mode
2. Transportation mode share percentages
3. Gasoline/diesel fuel usage/sales

Affordable Housing Linked to Transit

4-L4

Supports CA2020 Goal 4: **Reduce Travel Demand through Focused Growth**

GHG Reductions by 2020: ***166 $MTCO_2e$ per year***

Encourage affordable housing developments to locate near transit corridors, transit hubs, and downtown cores.

Community Co-Benefits

Implementation:

Each jurisdiction would develop policies and incentives to encourage affordable housing development for cities and unincorporated county areas. The jurisdictions would draft new ordinances or offer incentives encouraging the affordable housing development near transit hubs and city centers. Potential incentives could include reduced parking requirements, reductions in building and permit fees, increased density, and other related items. The communities may also work with RCPA/SCTA on this measure.

Measure Commitments:

Establish a goal for the percentage of housing developments greater than 5 units to be affordable and located near transit, between 15% and 23%; reduces VMT by 0.1% to 0.6%.

Key Progress Indicators:

1. The percentage of units that will be affordable housing units
2. VMT by transportation mode
3. Transportation mode share percentages
4. Gasoline/diesel fuel usage/sales

Local Transportation Demand Management Program **5-L1**

Supports CA2020 Goal 5: **Encourage a Shift toward Low-Carbon Transportation Options**

GHG Reductions by 2020: ***2,975 $MTCO_2e$ per year***

This measure includes a mandatory trip reduction ordinance (TRO) for employers with 50 employees or more. The mandatory TRO will also provide a non-trip reduction alternative in the form of purchase of an equivalent amount of GHG offsets for employers who decide not to implement trip reductions. This measure also supports voluntary transportation demand management (TDM) measures for employers with fewer than 50 employees, additional voluntary TDM measures (beyond the minimum TRO requirements) for larger employers, and requirements for TDM measures in new large residential projects.

Community Co-Benefits

Implementation:

Each jurisdiction will define the threshold for application of the ordinance, the specific TDM measures to be implemented, and methods for monitoring employer compliance. The jurisdictions may require certain TDM strategies (beyond the minimum TRO requirements) through the permitting process for businesses with 50 or more employees. Incentives for voluntary TDM by employers with fewer than 50 employees may also be used, such as reduced parking requirements, reductions in fees, and other related items. The communities may also work with RCPA/SCTA. For mandatory aspects of the ordinance, a non-trip reduction alternative will be provided in the form of requirements to purchase an equivalent amount of GHG offsets.

Measure Commitments:

Support voluntary TDM measures for small employers (< 50); implement mandatory TRO for employers with 50 employees or more (would reduce communitywide VMT by 2%).

Key Progress Indicators:

1. Number of businesses or employees participating in the TDM program
2. VMT by transportation mode
3. Transportation mode share percentages
4. Gasoline/diesel fuel usage/sales (and GHG offsets for those selecting this option)

Carpool-Incentives and Ride-Sharing Program **5-L2**

Supports CA2020 Goal 5: **Encourage a Shift toward Low-Carbon Transportation Options**

GHG Reductions by 2020: ***5,709 $MTCO_2e$ per year***

Create or promote a regional ride-sharing program and encourage participation by local employers through their TDM programs. Focus on large employers to create programs. Actively disseminate information to the community regarding the variety of ridesharing options from 511.org to private companies.

Community Co-Benefits

Implementation:

Each participating jurisdiction will develop a carpool incentive program attractive to employers, including managing the financial incentives for carpooling. For example, the City of Santa Rosa offers free parking in downtown garages and eligibility for monthly prize drawings to carpool commuters (and employers) registered in the City's Trip Reduction program. Similar incentives could be provided by other communities. Additional strategies include connecting commuters to formal carpool organizers. Jurisdictions can consider using 511 ridesharing forums, dynamic rideshare apps (e.g., Carma, Zimride, Ridejoy), or helping to facilitate communication among employers in the same geographic area. Communities can also designate convenient locations as casual carpool pickup spots/park-and-ride lots. Other possible strategies include making the requirements for ridesharing services less restrictive to reduce the barrier to entry, such as lowering age limits or eliminating affiliation requirements. Connecting vanpool organizers with commuters would also be beneficial.

Measure Commitments:

Develop a carpool incentive program with employee participation between 25% and 80%; reduce VMT by 1.3% to 3.9%.

Key Progress Indicators:

1. Number of businesses or employees participating in the program
2. VMT by transportation mode
3. Transportation mode share percentages
4. Gasoline/diesel fuel usage/sales

Guaranteed Ride Home

5-L3

Supports CA2020 Goal 5: **Encourage a Shift toward Low-Carbon Transportation Options**

GHG Reductions by 2020: ***Not Quantified***

Implement a guaranteed ride home program to provide a free car-share, shuttle, or taxi ride home in case of an emergency (illness, family crisis, unscheduled overtime) for employees who use an alternative to driving alone to work (public transit, carpooling, vanpooling, biking, or walking) on the day of the emergency. For example, the City of Santa Rosa has a guaranteed ride home program for employees (or employers) registered in the City's Trip Reduction Program.

Community Co-Benefits

Implementation:

Each jurisdiction would be responsible for implementing this measure. The jurisdictions may work with RCPA/SCTA to implement this program.

Measure Commitments:

Percentage participation in guaranteed ride home program.

Key Progress Indicators:

1. Number of businesses or employees participating in the guaranteed ride home program
2. VMT by transportation mode
3. Transportation mode share percentages
4. Gasoline/diesel fuel usage/sales

Supporting Bicycle/Pedestrian Measures **5-L4**

Supports CA2020 Goal 5: Encourage a Shift toward Low-Carbon Transportation Options

GHG Reductions by 2020: Not Quantified

This measure includes several local actions to support bicycle use and pedestrian travel.

- Identify bicycle/pedestrian route gaps including improving connections across community boundaries. Prioritize funding and construction of routes that close key gaps across community boundaries.
- Encourage implementation of city and County bike/pedestrian master plans. Identify common barriers to implementation of current plans.
- Update municipal codes to require pedestrian and bicycle facilities (if needed).
- Work with transit agencies to increase bike storage on buses, at bus stops, and at transit hubs and ferry terminals.
- Require bicycle facilities at all park-and-ride lots and transit stations.
- Consider implementing bike-sharing programs.

Community Co-Benefits

Implementation:

SCTA will work with the cities and county transit agencies to coordinate the identification and implementation of cross-jurisdictional bicycle and pedestrian corridor projects. Each jurisdiction will update municipal codes and prepare or update their bike/pedestrian master plans, as needed. As discussed above, the jurisdictions will need to identify route gaps and coordinate with the County and SCTA on routes that are cross-jurisdictional. The bike and pedestrian master plans will outline needed improvements and the areas identified for expansion. Communities will also coordinate with transit agencies to improve the bike-transit facilities.

Measure Commitments:

Percentage participation in program**.**

Key Progress Indicators:

1. Number of businesses or employees participating in the program
2. VMT by transportation mode
3. Transportation mode share percentages
4. Gasoline/diesel fuel usage/sales

Traffic Calming

5-L5

Supports CA2020 Goal 5: Encourage a Shift toward Low-Carbon Transportation Options

GHG Reductions by 2020: 1,205 $MTCO_2e$ per year

Implement traffic-calming measures in downtown cores, accident hotspot locations, near schools and libraries, etc. Project design will include pedestrian/bicycle safety and other traffic-calming measures that exceed current jurisdiction requirements. Traffic-calming measures reduce motor vehicle speeds and encourage pedestrian and bicycle trips. Specific measures may include: marked crosswalks, countdown signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers, and others.

Community Co-Benefits

Implementation:

Each jurisdiction will develop a strategy to implement this measure appropriate to its community setting. Implementation may include holding public meetings to identify areas of concern for the community, conducting traffic studies to determine where traffic calming is needed, and securing funding to construct traffic-calming features. Traffic-calming measures can be made a condition of new development approvals where appropriate and can be incorporated in General Plans and Specific Plans. Jurisdictions will select specific measures to implement based on the issues and characteristics of each area. The communities may also work with SCTA.

Measure Commitments:

Implement traffic-calming measures in downtown core and near schools, yields communitywide VMT reduction of 0.1%.

Key Progress Indicators:

1. Percentage implementation of traffic-calming measures
2. VMT by transportation mode
3. Transportation mode share percentages
4. Gasoline/diesel fuel usage/sales

Parking Policies

5-L6

Supports CA2020 Goal 5: **Encourage a Shift toward Low-Carbon Transportation Options**

GHG Reductions by 2020: ***2,489 $MTCO_2e$ per year***

Implement additional parking policies to promote reduction in single-occupancy vehicle travel, such as on-street market pricing in downtown core areas. Consider reduced parking requirements, shared parking, and in-lieu fees, in combination with providing transit and bicycle facilities, in appropriate areas.

Community Co-Benefits

Implementation:

Each jurisdiction would be responsible for implementing this measure. The communities may also work with SCTA. Staff would select parking pricing policies appropriate for their community and develop a process for implementation and management, which may include updating municipal codes. The jurisdictions would draft new ordinances and/or General Plan policies, or offer incentives encouraging reduced parking requirements and increased transit or bicycle facilities. Potential incentives could include tax breaks or deductions, or other rebates.

Measure Commitments:

Percentage increase in parking prices and the percentage of area subject to pricing.

Key Progress Indicators:

1. Percentage increase in parking pricing
2. Percentage of applicable area subject to parking pricing
3. VMT by transportation mode
4. Transportation mode share percentages
5. Gasoline/diesel fuel usage/sales

Supporting Parking Policy Measures *5-L7*

Supports CA2020 Goal: 5 **Encourage a Shift toward Low-Carbon Transportation Options**

GHG Reductions by 2020: ***Not Quantified***

Offer prioritized parking for hybrid/EV cars, carpools, vanpools at city-center corridors, new developments, public parking areas, and municipal facilities. Consider amending zoning code to require new parking lots to provide prioritized parking for carpools, vanpools, hybrids, and EVs, and provide charging facilities.

Community Co-Benefits

Implementation:

The jurisdictions will identify supporting parking policy strategies appropriate for their community and develop specific policies and guidelines to implement and monitor them. Implementation could include new ordinances and/or General Plan policies, zoning code amendments, or incentives encouraging prioritized parking requirements for alternatively fueled vehicles or carpools. Potential incentives could include tax breaks or deductions, or other rebates. The jurisdictions may also work with RCPA/SCTA.

Measure Commitments:

Provide priority parking for low emission vehicles, carpools, vanpools.

Key Progress Indicators:

1. VMT by transportation mode
2. Transportation mode share percentages
3. Gasoline/diesel fuel usage/sales

Electric Vehicle Charging Station Program 7-L1

Supports CA2020 Goal 7: **Encourage a Shift toward Low-Carbon Fuels in Vehicles and Equipment**

GHG Reductions by 2020: *60 $MTCO_2e$ per year*

Develop local charging stations to support EVs. This measure is in addition to the regional Measure 7-C1.

Community Co-Benefits

Implementation:

The jurisdictions would work with PG&E and SCP to identify grants and other funding sources to help finance the installation of charging stations throughout the county. In addition, SCP, ESD (through available PACE financing options) and Northern Sonoma County Air Pollution Control District (NSCAPCD) would create a package to install and finance charging stations.

Measure Commitments:

Install 100 Level I and II charging stations.

Key Progress Indicators:

1. The number of EVs registered
2. The number of EV charging stations installed
3. The amount of electricity distributed/sold by the charging stations
4. The number of Clean Vehicle Rebate Project rebates issued
5. Gasoline/diesel fuel usage/sales

Electrify Construction Equipment

7-L2

Supports CA2020 Goal 7: **Encourage a Shift toward Low-Carbon Fuels in Vehicles and Equipment**

GHG Reductions by 2020: ***365 $MTCO_2e$ per year***

Establish a goal such that a percentage of construction equipment uses alternative fuels or electricity in place of diesel and gasoline. Equipment could include electric or hybrid-electric dozers, excavators, or loaders, all of which are on the market. Construction equipment powered by other alternative fuels, such as compressed natural gas (CNG), is also available. New development would be required to provide a construction equipment management plan that meets the local community requirements for use of alternatively fueled equipment (including electrical equipment) during project construction.

Community Co-Benefits

Implementation:

Each jurisdiction would work in close cooperation with the appropriate air district to draft an ordinance and develop outreach programs to be consistent with current air district rules and California Environmental Quality Act (CEQA) guidelines. The air district sets air quality related requirements on construction vehicles and also provides mitigation options related to construction vehicles through Voluntary Emission Reduction Agreement programs that may overlap with this measure.

This measure could be implemented through discretionary approvals and permitting for new projects. Communities could provide incentives for electric and more efficient construction equipment to developers and contractors, such as rebates and subsidies and information on financing for this equipment. Encourage the use of alternative fuels for construction equipment on site, where feasible, such as CNG, liquefied natural gas, propane, or biodiesel. Require a certain percentage of all construction equipment on new development projects to be electrically powered as a condition of approval; this could be incorporated into the construction contracts.

Measure Commitments:

Electrify 5% to 10% of construction equipment.

Key Progress Indicators:

1. Electric equipment purchases
2. Construction equipment fuel use

Reduce Fossil Fuel Use in Equipment through Efficiency or Fuel Switching

7-L3

Supports CA2020 Goal 7: **Encourage a Shift toward Low-Carbon Fuels in Vehicles and Equipment**

GHG Reductions by 2020: ***Not Quantified***

This voluntary measure would include supporting farmers to reduce fuel use in agricultural equipment by converting equipment currently using gasoline, diesel, or liquefied petroleum gas to alternative fuels with lower GHG intensity (such as natural gas, biofuels, or solar electricity) as feasible, keeping equipment maintained and in good working order, replacing old equipment with newer and more efficient equipment, and using global positioning systems (GPS) to optimize equipment operation.

Community Co-Benefits

Implementation:

Encourage farmers to participate in the California Air Resources Board's (ARB) Carl Moyer Program, which provides incentives for engines that beat emissions standards. A particular focus may be expanding renewable energy use for water pumps and wind machines.

Measure Commitments:

Support owners of agricultural and other off-road equipment in switching to cleaner fuels and keeping equipment in good working order; goal of 10% reduction in GHG.

Key Progress Indicators:

1. Alternative fuel equipment purchases
2. Equipment fuel use

Idling Ordinance

8-L1

Supports CA2020 Goal 8: **Reduce Idling**

GHG Reductions by 2020: ***13,120 $MTCO_2e$ per year***

Limit idling of all commercial vehicles to 3 minutes except as necessary for the loading or unloading of cargo within a period not to exceed 30 minutes.

Community Co-Benefits

Implementation:

Each jurisdiction would adopt and implement a new commercial vehicle idling ordinance. The communities could also work with RCPA and/or Bay Area Air Quality Management District (BAAQMD) and NSCAPCD to implement the ordinance.

Measure Commitments:

Limiting idling of commercial vehicles to 3 minutes will save 2% of commercial vehicle fuel.

Key Progress Indicators:

1. Adoption of idling limit ordinances
2. Diesel fuel usage/sales

Idling Ordinance for Construction Equipment

8-L2

Supports CA2020 Goal 8: **Reduce Idling**

GHG Reductions by 2020: ***256 $MTCO_2e$ per year***

Adopt an ordinance limiting idling time for heavy-duty construction equipment beyond ARB or local air district regulations and if not already required as part of CEQA mitigation. The California Air Pollution Control Officers Association (2010) recommends a 3-minute idling limit. Encourage contractors as part of permitting requirements or city contracts to submit a construction vehicle management plan that may include idling time requirements, hour meters on equipment, and/or documenting the horsepower, age, and fuel of all on-site equipment. California state law currently requires all off-road equipment fleets to limit idling to no more than 5 minutes.

Community Co-Benefits

Implementation:

Each jurisdiction would adopt and implement a new commercial vehicle idling ordinance. The jurisdictions could also work with RCPA and/or BAAQMD and NSCAPCD to implement the ordinance.

Measure Commitments:

Reduce idling time for construction equipment to 3 minutes (beyond state requirement of 5 minutes).

Key Progress Indicators:

1. Adoption of idling limit ordinances
2. Diesel fuel usage/sales

Create Construction and Demolition Reuse and Recycling Ordinance

9-L1

Supports CA2020 Goal 9: **Increase Solid Waste Diversion**

GHG Reductions by 2020: ***4 $MTCO_2e$ per year***

Implement consistent countywide goals for recycling and reuse of construction and demolition (C&D) waste. This could follow the Petaluma model, which requires development projects to have a Construction Phase Recycling Plan that addresses the reuse and recycling of major waste materials, creates a minimum diversion rate for C&D waste on all projects (such as 75%), and requires an inventory of usable materials prior to any demolition.

Community Co-Benefits

Implementation:

Each jurisdiction will implement this measure through a C&D ordinance, with assistance from the Sonoma County Waste Management Agency (SCWMA). SCWMA or the RCPA could assist by drafting a model ordinance for use/adaptation by local jurisdictions.

Measure Commitments:

Implement consistent countywide goals for C&D waste to establish goal and procedures. Increase C&D diversion to 72% to 75% by 2020.

Key Progress Indicators:

1. C&D waste diversion rate
2. Tonnage of C&D waste sent to landfills
3. Tonnage of C&D waste recycled
4. Tonnage of C&D waste composted
5. Tonnage of C&D waste diverted to other ends

Senate Bill SB X7-7 – Water Conservation Act of 2009

11-L1

Supports CA2020 Goal 11: Reduce Water Consumption

GHG Reductions by 2020: 16,653 $MTCO_2e$ per year

Meet (or exceed) the state's per-capita water use reduction goal for 2020 as established by SB X7-7 (2009). This statute requires urban water agencies throughout California to increase conservation to achieve a statewide goal of a 20% reduction in urban per-capita use (compared to nominal 2005 levels) by December 31, 2020 (referred to as the "20X2020 goal"). Each urban water retailer in the county subject to the law has established a 2020 per-capita urban water use target (in terms of gallons per capita per day) to meet this goal. Specific per-capita water use reduction goals vary by water agency.

Community Co-Benefits

Implementation:

Each urban water retailer in the county subject to the law has established a 2020 per-capita urban water use target to meet this goal and is responsible for implementing this measure. The jurisdictions would also need to work with the water retailers to implement water-saving measures at the local level. Water cutbacks would require the communities to engage and encourage residents and businesses to find ways to save water. The jurisdictions will use the Energy Watch partnership and work with SCP and PG&E to help implement this measure. The jurisdictions will also encourage "pay as you save" programs for energy and water efficiency.

Measure Commitments:

Meet or exceed state goal (20% reduction in per capita use).

Key Progress Indicators:

1. Per-capita water use for each water retailer/community
2. Gallons of water saved
3. Water consumption

Water Conservation for New Construction

11-L2

Supports CA2020 Goal 11: Reduce Water Consumption

GHG Reductions by 2020: 295 $MTCO_2e$ per year

Implement a water-reduction target for new development that exceeds the SB X7-7 20% reduction target, such as a 30% reduction in water use for each community. To satisfy this goal, require adoption of the Voluntary CALGreen Tier 1 water-efficiency measures for new residential and nonresidential construction. CALGreen voluntary measures recommend use of water-efficient appliances and plumbing and irrigation systems, as well as more aggressive water savings targets.

Community Co-Benefits

Implementation:

The jurisdictions will update building codes for new buildings to require use of voluntary CALGreen Tier 1 water-efficiency measures, including:

- Use of low-water irrigation systems
- Installation of rainwater systems
- Installation of water-efficient appliances and plumbing fixtures
- A 30% to 40% reduction over baseline indoor water use, and a 55% to 60% reduction in outdoor potable water use (CALGreen Tier 1 or 2).

Communities could apply for State Water Resources Control Board grant money for the water-energy "standard offer" pilot project.

Measure Commitments:

Require Voluntary CALGreen Tier 1 water-efficiency measures for 0% to 50% of new residential and 0–100% of new residential and nonresidential construction.

Key Progress Indicators:

1. Gallons of water saved
2. Water consumption
3. Energy savings associated with water usage
4. Total energy consumption associated with water usage

Water Conservation for Existing Buildings

11-L3

Supports CA2020 Goal 11: Reduce Water Consumption

GHG Reductions by 2020: 2,172 $MTCO_2e$ per year

Achieve a water-reduction target for existing development that exceeds the SB X7-7 20% reduction target, such as a 30% reduction in water use by implementing a program to retrofit existing buildings to achieve higher levels of water efficiency. Encourage existing buildings (constructed before 2015) to use voluntary CALGreen Tier 1 water-efficiency measures.

Community Co-Benefits

Implementation:

The jurisdictions could require water conservation upgrades for all existing buildings that undergo major remodels or renovations and/or incentivize water-efficiency upgrades outside the permitting process. Education and outreach programs will help educate residents and businesses about the importance of water efficiency and how to reduce water use. Rebate programs will help promote installation of water-efficient plumbing fixtures. The program could include:

- A Water Audit Program in collaboration with local water purveyors that offer free water audits
- Development plans to ensure water conservation techniques are used (e.g., rain catchment systems, drought tolerant landscape)
- Requirements for water-efficiency upgrades when permitting renovations or additions of existing buildings
- Use of water conservation pricing (e.g., tiered rate structures) to the extent allowed by law to encourage efficient water use
- Incentives for projects that demonstrate significant water conservation through use of innovative technologies

The jurisdictions will use the Energy Watch partnership and work with SCP and PG&E to help implement this measure. The communities will also encourage "pay as you save" programs for energy and water efficiency.

Measure Commitments:

Install water-efficiency measures in 0% to 25% of existing residential and 0% to 50% of existing nonresidential.

Key Progress Indicators:

1. Gallons of water saved
2. Water consumption
3. Energy savings associated with water usage
4. Total energy consumption associated with water usage

Greywater Use

12-L1

Supports CA2020 Goal 12: Increase Recycled Water and Greywater Use

GHG Reductions by 2020: 36 $MTCO_2e$ per year

Establish a goal to replace a certain percentage of potable water used for residential non-potable uses (landscaping, toilet flushing, etc.) with greywater.

Community Co-Benefits

Implementation:

Each participating jurisdiction will establish a greywater goal for this measure and will work with water providers to assess progress toward the goals.

Measure Commitments:

Replace 1% to 50% of potable water currently used for non-potable uses with greywater.

Key Progress Indicators:

1. Percentage of greywater water used for residential non-potable water uses
2. Gallons of greywater used
3. Gallons of potable water saved
4. Total potable water consumption

Green Energy for Water Production and Wastewater Processing in Healdsburg and Cloverdale

14-L1

Supports CA2020 Goal 14: **Increase Use of Renewable Energy in Water and Wastewater Systems**

GHG Reductions by 2020: *412 $MTCO_2e$ per year*

Healdsburg would use green energy (100% renewable) sources for a certain percentage of its water production and/or conveyance. Cloverdale has implemented solar energy arrays at the city water and wastewater plants.

Community Co-Benefits

Implementation:

Healdsburg will be responsible for implementing green energy projects at its water production and wastewater processing facilities. Cloverdale has already implemented solar arrays at its water and wastewater plants and will be responsible for continuing to ensure that the arrays are used to their maximum potential

Measure Commitments:

Provide increasing amount of renewable energy for water supply and wastewater treatment in the two cities.

Key Progress Indicators:

1. Solar electric generation capacity
2. Electricity generation
3. Renewable portfolio for Healdsburg's electricity
4. Healdsburg electricity emission factor

Methane Capture and Combustion at Dairies

15-L1

Supports CA2020 Goal 15: Reduce Emissions from Livestock Operations

GHG Reductions by 2020: 14,530 $MTCO_2e$ per year

Encourage installation of methane digesters to capture emissions from the decomposition of manure at dairies. The methane could be used on-site as an alternative to natural gas in combustion or power production, or as a transportation fuel. Individual project proponents could also sell GHG credits associated with these installations on the voluntary carbon market.

Community Co-Benefits

Implementation:

All dairy operations are located within the unincorporated area. The County would work with dairies to discuss relevant incentives and the feasibility of installing methane capture equipment.

Measure Commitments:

20% of dairy cattle waste in the unincorporated fed to digesters.

Key Progress Indicators:

1. The number of digesters installed
2. The quantity of methane captured by each digester
3. The electricity generation capacity for each new digester
4. The electricity generation for each new digester

Reduce Emissions from Enteric Fermentation

15-L2

Supports CA2020 Goal 15: Reduce Emissions from Livestock Operations

GHG Reductions by 2020: Not Quantified

This voluntary measure would encourage dairies and livestock operations to explore ways to reduce GHG emissions from enteric fermentation (methane and nitrous oxide). One method for reducing these emissions would be changing animal diets to inhibit GHG production. Options include dietary oils (such as whole cottonseed oil, sunflower oil, coconut oil, and palm oil), the use of corn or legume silage in place of grass silage, use of concentrate feeds, nitrates, ionophores, and tannins, and improvement of forage quality and the overall efficiency of dietary nutrient use. Potential use of pomace from winemaking should also be explored.

Community Co-Benefits

Implementation:

Under this measure, the County would work with dairy and livestock operators to test feasible and cost-effective approaches suitable for application in Sonoma County. The County would help to identify grant sources to fund demonstration projects with voluntary dairy/livestock operator participation.

Measure Commitments:

Pursue best practices for animal diets to minimize enteric fermentation.

Key Progress Indicators:

1. Animal diet best practices

Optimize Fertilizer Use

16-L1

Supports CA2020 Goal 16: Reduce Emissions from Fertilizer Use

GHG Reductions by 2020: 1,759 $MTCO_2e$ per year

Encourage voluntary agricultural practices that reduce or eliminate the need for fertilizer (especially synthetic fertilizer). Work with growers to provide incentives for organic fertilizers as an alternative. Create an outreach program to help growers optimize nitrogen application rates, decrease overall fertilizer inputs and cost, maintain current crop yields, and reduce emissions of nitrous oxide.

Community Co-Benefits

Implementation:

The County would lead this measure, given that the vast majority of agricultural activity is in the unincorporated area. Cities with agricultural activities (including urban farming and community gardens) could collaborate with the County to implement this measure. The County would develop voluntary policies that encourage alternatives to synthetic fertilizers. The County would need to work with growers to discuss which incentives would be relevant and the levels of reduction that would be feasible.

Measure Commitments:

Develop incentives and tools to reduce fossil fuel–based fertilizer use by 20%.

Key Progress Indicators:

1. The amount and type of fossil fuel–based fertilizer applied to crops